

DQA: _____ Date: _____



WORK ORDER NON-CONFORMANCE / UPDATE

QA Closed: _____ Date: _____

Work Order update only ☐

Work Order: _____ Part No. _____ NCR No. _____		DISPOSITION Rework ☐ Scrap ☐ Use-as-is ☐ Suspected Unapproved ☐		AGAINST DEPARTMENT/PROCESS Skid-tube ☐ Machining ☐ Thermoforming ☐ Large Fab ☐ Cross tube ☐ Small Fab ☐ Finishing ☐ Composite ☐ Water Jet ☐ Prod. Eng. Coord. ☐ Rec/Store/Packaging ☐ Supplier ☐ Engineering ☐ Quality ☐ Other ☐					
Date :		Step #:		QTY Effective :			MRB (QSI042) Approval Completed By _____ Lead hand / Supervisor Approval Verification _____ QC / QA Coordinator Approval _____		
Description Work Order Deviation				Disposition					
Root Cause Environment ☐ Design ☐ Doc/Data ☐ Equip/Tooling ☐ Handling/Pre ☐ Material ☐ Internal Transport ☐ Tribal Knowledge ☐ LOA ☐ Substation ☐ Past Expiry Date ☐ Misidentified ☐ No Re-verification ☐ Operator ☐ Offset/Setup ☐ Supplier ☐ Training ☐ Use for Testing ☐ Poor Information ☐ Rushing ☐ Product Improvement ☐ Process Improvement ☐ Manufacturing Process ☐ Past Due ☐		FAULT CATEGORY Pressure/Forced ☐ Bending ☐ Centre Not Concentric ☐ Cracks ☐ Crimp/Kink/Ripple/Wave ☐ Cuffs ☐ Crushing ☐ Heat Treat ☐ Wave/Twist in Tube ☐ Marks/Chatter ☐ Temperature/Cure ☐ Set-up ☐ BOM/Route ☐ Broken/Damage/Defect ☐ Inspection Incomplete/Unqualified ☐ Contamination ☐ Countersink ☐ Cut Too Short ☐ Instructions Incomplete/Unclear ☐ Drill Holes ☐ Power Loss/Surge ☐ Folio/Program ☐ Grain ☐ Weld ☐ Wrong Stock Pulled ☐ Out of Sequence ☐ Off-set ☐ Misabeled ☐ Fit/Function ☐ Misaligned/off center ☐ Positioned Wrong ☐ Outside Dimensions ☐ Over/Under tolerance ☐ Part Incorrect ☐ Part Lost/Missing ☐ Part Moved ☐ Drawing ☐ Finish ☐ Misread ☐ Turning Sequence ☐		OTHER : _____					

Work Order ID 164653

Thursday, July 27, 2017 11:44:20 AM

164653

Page 2

Item ID: D412-760-011 Accept ***N900040100*** Setup Start ***NS1***
Revision ID: Stop ***NS2***
Item Name: Cabin Floor Protector
Start Date: 7/27/2017 Start Qty: 3.00 ***3*** Cust Item ID:
Required Date: 8/2/2017 Req'd Qty: 3.00 ***3*** Customer:
Reference:

Approvals: Process Plan: _____ Date: _____ Tooling: _____ Date: _____ Run Start ***NR1***
QC: _____ Date: _____ SPC (Y/N): _____ Date: _____ Stop ***NR2***

Sequence ID/ Work Center ID	Operation Description	Set Up/ Run Hours	Tool ID	Tool #	Plan Code	Accept Qty	Reject Qty	Reject Number	Insp. Stamp
130 *130* Packaging	Identify as per dwg & Stock Location: _____ Packaging	0.00				3x	DAS 28 9-89		AUG 1 5 2017
Packaging	Memo Identify and pack for shipping as per PPP D412-760-011 Location: FG049 Fg040	0.00							
140 *140* QC	QC21- Final Inspection - Work Order Release	0.00					DAS 21 9-89		AUG 1 6 2017
Quality Control	Memo	0.30					DAS 21 9-89		AUG 1 6 2017

DQA: _____ Date: _____

**WORK ORDER NON-CONFORMANCE / UPDATE**

QA Closed: _____ Date: _____

Work Order update only ☐

Work Order: _____ Part No. _____ NCR No. _____		DISPOSITION Rework ☐ Scrap ☐ Use-as-is ☐ Suspected Unapproved ☐		AGAINST DEPARTMENT/PROCESS Skid-tube ☐ Machining ☐ Thermoforming ☐ Large Fab ☐ Cross tube ☐ Small Fab ☐ Finishing ☐ Composite ☐ Water Jet ☐ Prod. Eng. Coord. ☐ Rec/Store/Packaging ☐ Supplier ☐ Engineering ☐ Quality ☐ Other ☐					
Date : _____		Step #: _____		QTY Effective : _____			MRB (QSI042) Approval Completed By _____ Lead hand / Supervisor Approval Verification _____ QC / QA Coordinator Approval _____		
Description Work Order Deviation				Disposition					
Root Cause Environment ☐ Design ☐ Doc/Data ☐ Equip/Tooling ☐ Handling/Pre ☐ Material ☐ Internal Transport ☐ Tribal Knowledge ☐ LOA ☐ Substation ☐ Past Expiry Date ☐ Misidentified ☐ No Re-verification ☐ Operator ☐ Offset/Setup ☐ Supplier ☐ Training ☐ Use for Testing ☐ Poor Information ☐ Rushing ☐ Product Improvement ☐ Process Improvement ☐ Manufacturing Process ☐ Past Due ☐		FAULT CATEGORY Pressure/Forced ☐ Bending ☐ Centre Not Concentric ☐ Cracks ☐ Crimp/Kink/Ripple/Wave ☐ Cuffs ☐ Crushing ☐ Heat Treat ☐ Wave/Twist in Tube ☐ Marks/Chatter ☐ Temperature/Cure ☐ Set-up ☐ BOM/Route ☐ Broken/Damage/Defect ☐ Inspection Incomplete/Unqualified ☐ Contamination ☐ Countersink ☐ Cut Too Short ☐ Instructions Incomplete/Unclear ☐ Drill Holes ☐ Power Loss/Surge ☐ Folio/Program ☐ Grain ☐ Weld ☐ Wrong Stock Pulled ☐ Out of Sequence ☐ Off-set ☐ Mislabeled ☐ Fit/Function ☐ Misaligned/off center ☐ Positioned Wrong ☐ Outside Dimensions ☐ Over/Under tolerance ☐ Part Incorrect ☐ Part Lost/Missing ☐ Part Moved ☐ Drawing ☐ Finish ☐ Misread ☐ Turning Sequence ☐							
		OTHER : ☐							

Picklist Print

Thursday, July 27, 2017 11:44:30 AM

Page 1

Work Order ID: 164653

164653

Parent Item: D412-760-011

D412-760-011

Parent Item Name: Cabin Floor Protector

Start Date: 7/27/2017

Required Date: 8/2/2017

Start Qty: 3.00

Required Qty: 3.00

Comments: IPP rev A 07.07.05 new issue EC
IPP Rev:B 08-08-20 revB as per dwg DD verified by:ec

Component Item ID/ Item Name	Replacement Item ID	Mfg/ Purch	Bin Item	Primary Location	Last Location	Route Seq ID	Unit of Measure	Qty on Hand	Qty per Kit	Total Qty	Qty Issued	Date Issued	Status
D3574-1 *D3574-1* Cabin Floor Protector		Manufactured	No			110	Each	0.0000	1 **	3 164654		AUG 14 2017	Smf
D3574-2 *D3574-2* Cabin Floor Protector		Manufactured	No			110	Each	0.0000	1 **	3 164655		AUG 14 2017	Smf
D3575-1 *D3575-1* Cargo Floor Protector		Manufactured	No			110	Each	0.0000	1 **	3 164656		AUG 14 2017	Smf
D3575-2 *D3575-2* Cargo Floor Protector		Manufactured	No			110	Each	0.0000	1 **	3 164657			Smf
D3580-1 *D3580-1* Joggle Bracket		Manufactured	No			110	Each	30.0000	6 **	18			
DAS 28 9-89 Location ST040 161954 163915 Loc Qty 30 10 20 Loc Code													
D3628-1 *D3628-1* Washer, Cupped		Manufactured	No			110	Each	191.0000	14 **	42			
DAS 28 9-89 Location FG 83587 ST044 151898 Loc Qty 10 10 181 181 Loc Code													

AUG 15 2017

AUG 15 2017

DQA: _____ Date: _____



WORK ORDER NON-CONFORMANCE / UPDATE

QA Closed: _____ Date: _____

Work Order update only ☐

Work Order: _____ Part No. _____ NCR No. _____		DISPOSITION Rework ☐ Scrap ☐ Use-as-is ☐ Suspected Unapproved ☐		AGAINST DEPARTMENT/PROCESS Skid-tube ☐ Machining ☐ Thermoforming ☐ Large Fab ☐ Cross tube ☐ Small Fab ☐ Finishing ☐ Composite ☐ Water Jet ☐ Prod. Eng. Coord. ☐ Rec/Store/Packaging ☐ Supplier ☐ Engineering ☐ Quality ☐ Other ☐																																																											
Date :		Step #:		QTY Effective :				MRB (QSI042) Approval																																																							
Description Work Order Deviation				Disposition				Completed By Lead hand / Supervisor Approval Verification QC / QA Coordinator Approval																																																							
Root Cause		FAULT CATEGORY																																																													
Environment ☐	No Re-verification ☐	Pressure/Forced ☐	Temperature/Cure ☐	Power Loss/Surge ☐	Positioned Wrong ☐	Design ☐	Operator ☐	Bending ☐	Set-up ☐	Folio/Program ☐	Outside Dimensions ☐	Doc/Data ☐	Offset/Setup ☐	Centre Not Concentric ☐	BOM/Route ☐	Grain ☐	Over/Under tolerance ☐	Equip/Tooling ☐	Supplier ☐	Cracks ☐	Broken/Damage/Defect ☐	Weld ☐	Part Incorrect ☐	Handling/Pre ☐	Training ☐	Crimp/Kink/Ripple/Wave ☐	Inspection Incomplete/Unqualified ☐	Wrong Stock Pulled ☐	Part Lost/Missing ☐	Material ☐	Use for Testing ☐	Cuffs ☐	Contamination ☐	Out of Sequence ☐	Part Moved ☐	Internal Transport ☐	Poor Information ☐	Crushing ☐	Countersink ☐	Off-set ☐	Drawing ☐	Tribal Knowledge ☐	Rushing ☐	Heat Treat ☐	Cut Too Short ☐	Mislabeled ☐	Finish ☐	LOA ☐	Product Improvement ☐	Wave/Twist in Tube ☐	Instructions Incomplete/Unclear ☐	Fit/Function ☐	Misread ☐	Substation ☐	Process Improvement ☐	Marks/Chatter ☐	Drill Holes ☐	Misaligned/off center ☐	Turning Sequence ☐	Past Expiry Date ☐	Manufacturing Process ☐	OTHER : _____	
Misidentified ☐	Past Due ☐																																																														

Picklist Print

Thursday, July 27, 2017 11:44:30 AM

Page 2

Work Order ID: 164653

164653

Parent Item: D412-760-011

D412-760-011

Parent Item Name: Cabin Floor Protector

Start Date: 7/27/2017

Required Date: 8/2/2017

Start Qty: 3.00

Required Qty: 3.00

D3628-3 Manufactured No

110 Each 80.0000 6 18

D3628-3

Cupped Washer

**

AUG 15 2017

DAS
27
9-89

DAS
28
9-89

Location

Loc Qty

Loc Code

ST043

80

148674

80

MS24694-S100

Purchased No

110 Each 108.0000 6 18

MS24694-S100

Flat Head Screw

**

AUG 15 2017

DAS
27
9-89

DAS
28
9-89

Location

Loc Qty

Loc Code

ST283

108

m135864

8

m138045

100

MS24694-S54

Purchased No

110 Each 49.0000 14 42

MS24694-S54

SCREW

**

AUG 15 2017

DAS
27
9-89

DAS
28
9-89

Location

Loc Qty

Loc Code

ST284

49

m137951

49

NAS1149D0363J

Purchased No

110 Each 1,082.000 28 84

NAS1149D0363.J

Washer

**

AUG 15 2017

DAS
27
9-89

DAS
28
9-89

Location

Loc Qty

Loc Code

GA

628

m134055

13

m137164

15

m137963

600

ST263

454

m137587

73

m137963

381

Thursday, July 27, 2017 11:44:30 AM

Shop Packet Print

Page 2

DQA: _____ Date: _____



WORK ORDER NON-CONFORMANCE / UPDATE

QA Closed: _____ Date: _____

Work Order update only ☐

Work Order: _____ Part No. _____ NCR No. _____	DISPOSITION Rework ☐ Scrap ☐ Use-as-is ☐ Suspected Unapproved ☐	AGAINST DEPARTMENT/PROCESS Skid-tube ☐ Machining ☐ Thermoforming ☐ Large Fab ☐ Cross tube ☐ Small Fab ☐ Finishing ☐ Composite ☐ Water Jet ☐ Prod. Eng. Coord. ☐ Rec/Store/Packaging ☐ Supplier ☐ Engineering ☐ Quality ☐ Other ☐			
Date : _____	Step #: _____	QTY Effective : _____		MRB (QSI042) Approval	
Description Work Order Deviation		Disposition			
		Completed By			
		Lead hand / Supervisor Approval Verification			
		QC / QA Coordinator Approval			
Root Cause		FAULT CATEGORY			
Environment ☐ Design ☐ Doc/Data ☐ Equip/Tooling ☐ Handling/Pre ☐ Material ☐ Internal Transport ☐ Tribal Knowledge ☐ LOA ☐ Substation ☐ Past Expiry Date ☐ Misidentified ☐ No Re-verification ☐ Operator ☐ Offset/Setup ☐ Supplier ☐ Training ☐ Use for Testing ☐ Poor Information ☐ Rushing ☐ Product Improvement ☐ Process Improvement ☐ Manufacturing Process ☐ Past Due ☐	Pressure/Forced ☐ Bending ☐ Centre Not Concentric ☐ Cracks ☐ Crimp/Kink/Ripple/Wave ☐ Cuffs ☐ Crushing ☐ Heat Treat ☐ Wave/Twist in Tube ☐ Marks/Chatter ☐ Temperature/Cure ☐ Set-up ☐ BOM/Route ☐ Broken/Damage/Defect ☐ Inspection Incomplete/Unqualified ☐ Contamination ☐ Countersink ☐ Cut Too Short ☐ Instructions Incomplete/Unclear ☐ Drill Holes ☐	Power Loss/Surge ☐ Folio/Program ☐ Grain ☐ Weld ☐ Wrong Stock Pulled ☐ Out of Sequence ☐ Off-set ☐ Mislabeled ☐ Fit/Function ☐ Misaligned/off center ☐ Positioned Wrong ☐ Outside Dimensions ☐ Over/Under tolerance ☐ Part Incorrect ☐ Part Lost/Missing ☐ Part Moved ☐ Drawing ☐ Finish ☐ Misread ☐ Turning Sequence ☐			
OTHER : ☐					

Picklist Print

Thursday, July 27, 2017 11:44:30 AM

Page 3

Work Order ID: 164653

164653

Parent Item: D412-760-011

D412-760-011

Parent Item Name: Cabin Floor Protector

Start Date: 7/27/2017

Required Date: 8/2/2017

Start Qty: 3.00

Required Qty: 3.00

NAS1149D0463J

Purchased

No

110

Each

3,745.000

12

36

NAS1149D0463.J

Washer

DAS
27
9-89

DAS
28
9-89

Location

Loc Qty

Loc Code

GA	558	
M135056	40	
M137699	518	
ST260a	2600	
M137988	600	
<u>M138084</u>	2000	
ST263	587	
M137699	587	

AUG 15 2017

36

Thursday, July 27, 2017 11:44:30 AM

Shop Packet Print

Page 3

DQA: _____ Date: _____



WORK ORDER NON-CONFORMANCE / UPDATE

QA Closed: _____ Date: _____

Work Order update only ☐

Work Order: _____ Part No. _____ NCR No. _____		DISPOSITION Rework ☐ Scrap ☐ Use-as-is ☐ Suspected Unapproved ☐		AGAINST DEPARTMENT/PROCESS Skid-tube ☐ Machining ☐ Thermoforming ☐ Large Fab ☐ Cross tube ☐ Small Fab ☐ Finishing ☐ Composite ☐ Water Jet ☐ Prod. Eng. Coord. ☐ Rec/Store/Packaging ☐ Supplier ☐ Engineering ☐ Quality ☐ Other ☐					
Date :		Step #:		QTY Effective :			MRB (QSI042) Approval		
Description Work Order Deviation				Disposition				Completed By Lead hand / Supervisor Approval Verification QC / QA Coordinator Approval	
Root Cause		FAULT CATEGORY							
Environment ☐	No Re-verification ☐	Pressure/Forced ☐	Temperature/Cure ☐	Power Loss/Surge ☐	Positioned Wrong ☐				
Design ☐	Operator ☐	Bending ☐	Set-up ☐	Folio/Program ☐	Outside Dimensions ☐				
Doc/Data ☐	Offset/Setup ☐	Centre Not Concentric ☐	BOM/Route ☐	Grain ☐	Over/Under tolerance ☐				
Equip/Tooling ☐	Supplier ☐	Cracks ☐	Broken/Damage/Defect ☐	Weld ☐	Part Incorrect ☐				
Handling/Pre ☐	Training ☐	Crimp/Kink/Ripple/Wave ☐	Inspection Incomplete/Unqualified ☐	Wrong Stock Pulled ☐	Part Lost/Missing ☐				
Material ☐	Use for Testing ☐	Cuffs ☐	Contamination ☐	Out of Sequence ☐	Part Moved ☐				
Internal Transport ☐	Poor Information ☐	Crushing ☐	Countersink ☐	Off-set ☐	Drawing ☐				
Tribal Knowledge ☐	Rushing ☐	Heat Treat ☐	Cut Too Short ☐	Mislabeled ☐	Finish ☐				
LOA ☐	Product Improvement ☐	Wave/Twist in Tube ☐	Instructions Incomplete/Unclear ☐	Fit/Function ☐	Misread ☐				
Substation ☐	Process Improvement ☐	Marks/Chatter ☐	Drill Holes ☐	Misaligned/off center ☐	Turning Sequence ☐				
Past Expiry Date ☐	Manufacturing Process ☐								
Misidentified ☐	Past Due ☐	OTHER :							

5.0 PARTS LIST

Qty -011	Qty -013	Qty -015	Qty -017	Qty -019	Part Number	Description
X					D412-760-011	CABIN FLOOR PROTECTOR KIT
	X				D412-760-013	CABIN FLOOR PROTECTOR KIT
		X			D412-760-015	CABIN FLOOR PROTECTOR KIT
			X		D412-760-017	CABIN FLOOR PROTECTOR KIT
				X	D412-760-019	CABIN FLOOR PROTECTOR KIT
1					D3574-1	CABIN FLOOR PROTECTOR
1					D3574-2	CABIN FLOOR PROTECTOR
	1				D3574-3	CABIN FLOOR PROTECTOR
	1				D3574-4	CABIN FLOOR PROTECTOR
		1			D3574-5	CABIN FLOOR PROTECTOR
		1			D3574-6	CABIN FLOOR PROTECTOR
1					D3575-1	CABIN FLOOR PROTECTOR
1					D3575-2	CABIN FLOOR PROTECTOR
	1				D3575-3	CABIN FLOOR PROTECTOR
	1				D3575-4	CABIN FLOOR PROTECTOR
		1			D3575-5	CABIN FLOOR PROTECTOR
		1			D3575-6	CABIN FLOOR PROTECTOR
6	4	6	6	6	D3580-1	JOGGLE BRACKET
			1		D3788-1	CABIN FLOOR PROTECTOR
			1		D3788-2	CABIN FLOOR PROTECTOR
			1		D3788-3	CABIN FLOOR PROTECTOR
			1		D3788-4	CABIN FLOOR PROTECTOR
14	40	14	14	10	D3628-1	CUPPED WASHER
6	8	6	6		D3628-3	CUPPED WASHER
				1	D4122-1	FLOOR PROTECTOR, FORWARD
				1	D4122-3	FLOOR PROTECTOR, AFT
28		28	28		NAS1149D0363J	WASHER (AN960JD10)
12		12	12		NAS1149D0463J	WASHER (AN960JD416)
14		14	14		MS24694S54	SCREW
6		6	6		MS24694S100	SCREW

Work Order ID 164653

Thursday, July 27, 2017 11:44:20 AM

164653

Page 1

Item ID: D412-760-011

Accept

N900040100Setup Start ***NS1***

Revision ID:

Stop ***NS2***

Item Name: Cabin Floor Protector

Start Date: 7/27/2017 Start Qty: 3.00

3

Cust Item ID:

Required Date: 8/2/2017 Req'd Qty: 3.00

3

Customer:

Reference:

Approvals:

Process Plan:

Date:

JUL 27 2017

Tooling:

Date:

Run Start ***NR1***

QC:

Date:

SPC (Y/N):

Date:

Stop ***NR2***

Sequence ID/ Work Center ID	Operation Description	Set Up/ Run Hours	Tool ID	Tool #	Plan Code	Accept Qty	Reject Qty	Reject Number	Insp. Stamp
--------------------------------	--------------------------	----------------------	---------	--------	--------------	---------------	---------------	------------------	----------------

Draw Nbr

Revision Nbr

IIN-D412-760

G

100

Document Control

AUG 14 2017

100

DOCUMENT CONTROL

DC

Memo

0.00

DAS
5
9-89

③

AUG 14 2017

Doc.Control -USB or Paperwork

Photocopy bluefile & type labels per PPP D412-760-011 CHG002

110

Pick Kit

0.00

110

Packaging

Memo

0.00

Packaging

120

QC4- 100% Inspect kits for completeness

0.00

120

QC

Memo

0.09

Quality Control



Department of Transport

Supplemental Type Certificate

This approval is issued to:

Dart Aerospace Ltd.
1270 Aberdeen Street
Hawkesbury, Ontario
Canada K6A 1K7

Number: SH07-37

Issue No.: 3

Approval Date: June 29, 2007

Issue Date: July 28, 2010

Responsible Office:

Prairie and Northern

Aircraft/Engine Type or Model:

BELL 205A, 205A-1, 205B, 212, 214B, 214B-1, 412, 412 CF,
412 EP

Canadian Type Certificate or Equivalent:

BELL 205B H-104
BELL 214B, 214B-1 H-80
BELL 212, 412, 412 CF, 412 EP H-86
BELL 205A, 205A-1 H1SW

Description of Type Design Change:

Interior Protector Kits

**Installation/Operating Data,
Required Equipment and Limitations:**

Manufacture of the Interior Protector Kits must be in accordance with Dart Aerospace Ltd.
MDL-D412-760, Revision G, dated December 2, 2009, or later approved revision.

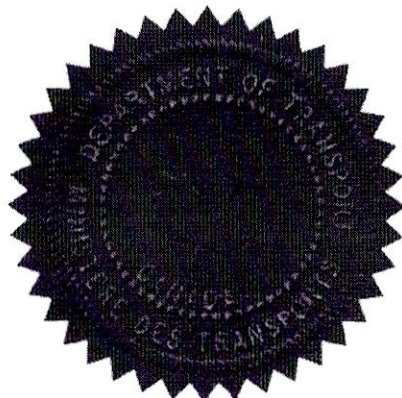
Installation of the Interior Protector Kits must be in accordance with Dart Aerospace Ltd.
IIN-D412-760, Revision E, dated December 2, 2009, or later approved revision.

Maintenance of the Interior Protector Kits must be in accordance with the Transport Canada accepted
Dart Aerospace Ltd. ICA-D412-760, Revision 4, dated December 2, 2009, or later Transport Canada
accepted revisions.

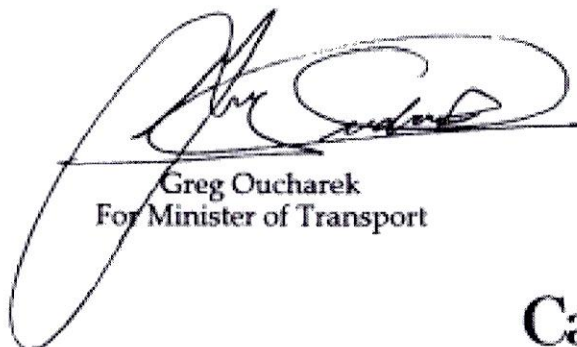
Basis of Certification:

The basis of certification for affected areas is CFR 14, Part 29, up to and including Amendment 29-47.

— End —



Conditions: This approval is only applicable to the type/model of aeronautical product specified therein.
Prior to incorporating this modification, the installer shall establish that the interrelationship between this
change and any other modification(s) incorporated **will not** adversely affect the airworthiness of the
modified product.



Greg Oucharek
For Minister of Transport

Canada